

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (Cancelled).

6. (Currently amended) ~~The method as claimed in claim 1~~ In a data network, a method of accessing an object in a meta file system stored in a network file server, the meta file system including a plurality of file system cells, the method comprising:

a network client sending a directory lookup request for the object to the network file server;

the network file server receiving the directory lookup request, and in response, performing a directory lookup for the object, and returning to the network client a file handle for the object, the file handle including an identifier of a file system cell including the object, and a pointer to the object in the file system cell;

the network client receiving the file handle for the object, sending to the network file server a request for access to the object, the request for access to the object including the file handle for the object; and

the network file server receiving the request for access to the object, and in response, the

network file server extracting the file system cell identifier and the object pointer from the file handle included in the request for access, using the file system cell identifier to find the file system cell that includes the object, and using the object pointer to find the object in the file system cell,

wherein the network file server includes a plurality of processors, and each of the file system cells has a respective one of the processors that is assigned exclusive management of metadata of said each of the file system cells, and wherein the network file server responds to the file access request by accessing a routing table with the extracted identifier of the file system cell in order to obtain a pointer to the respective one of the processors that is assigned exclusive management of metadata of the file system cell including the object, and using the pointer to the respective one of the processors to send a request to the respective one of the processors for management of metadata of the file system cell for accessing the object.

7. (Original) The method as claimed in claim 6, which includes the network file server finding a reference to another one of the file system cells during the accessing of the object after using the pointer to the respective one of the processors, and accessing the routing table to find a pointer to the respective one of the processors that is assigned exclusive management of metadata of said another one of the file system cells, and using the pointer to the respective one of the processors that is assigned exclusive management of metadata of said another one of the file system cells to send a request to the respective one of the processor that is assigned exclusive management of metadata of said another one of the file system cells for

access to metadata of said another one of the file system cells.

8. (Original) The method as claimed in claim 6, wherein the routing table includes a plurality of entries, and each entry includes a respective file system identifier of a file system cell in the meta file system, and an associated pointer to the respective one of the processors assigned exclusive management of the metadata of the file system cell identified by said respective file system identifier of a file system cell in the meta file system, and the method includes the network file server accessing the entry of the routing table containing the file system identifier of the file system cell including the object in order to obtain the associated pointer to the respective one of the processors assigned exclusive management of the metadata of the file system cell including the object.

9. (Original) The method as claimed in claim 6, wherein the routing table includes a plurality of entries, and each entry includes a respective file system identifier of a file system cell in the meta file system, and an associated pointer to a file system cell object containing a pointer to the respective one of the processors assigned exclusive management of the metadata of the file system cell identified by said respective file system identifier of a file system cell in the meta file system, and the method includes the network file server accessing the entry of the routing table containing the file system identifier of the file system cell including the object in order to obtain the associated pointer to the respective file system cell object containing the pointer to the respective one of the processors assigned exclusive management of the metadata of the file

system cell including the object.

10. (Original) A method of accessing an object in a meta file system stored in a network file server, the network file server including a cached disk array and a plurality of data mover computers for moving data between the cached disk array and a data network, the meta file system including a plurality of file system cells, each of the file system cells having a respective one of the data mover computers assigned exclusive management of metadata of said each of the file system cells, said method comprising:

storing a routing table in each of the plurality of data mover computers, each of the plurality of routing tables including an entry for each file system cell, each entry including a respective file system cell identifier and associating the respective file system cell identifier with a pointer to the respective one of the data mover computers assigned exclusive management of metadata of the file system cell identified by said respective file system cell identifier;

in response to the network file server receiving a request from the network for a file handle for a file, the network file server producing a file handle for the file, the file handle containing a file identifier obtained from the file system cell and a file system identifier for the file system cell containing the file; and

at least one of the data mover computers receiving a subsequent request from the network for access to the file, the request for access to the file including the file handle, said at least one of the data movers responding to the request for access to the file by accessing the routing table to obtain the pointer to the respective one of the data movers assigned exclusive

management of metadata of the file system cell containing the file in order to obtain management of metadata of the file system cell containing the file in order to access to the file.

11. (Original) The method as claimed in claim 10, wherein the step of producing the file handle includes interpreting a meta file system path specification associated with the file.

12. (Original) The method as claimed in claim 10, wherein each entry of the routing table includes a respective pointer to a respective file system cell object containing information associated with the file system cell identified by said respective file system cell identifier in said each entry, the information associated with the file system cell including a pointer to the data mover assigned exclusive management of metadata of the file system identified by said respective file system cell identifier in said each entry.

13. (Original) The method as claimed in claim 12, wherein the respective file system cell object includes a local/remote flag indicating whether or not said at least one of the data mover computers is assigned exclusive management of metadata of the file system identified by said respective file system cell identifier in said each entry.

14. (Original) The method as claimed in claim 12, wherein the respective file system cell object includes a specification of a communication protocol to be used by said at least one of the data mover computers for communicating with the data mover assigned exclusive

management of metadata of the file system identified by said respective file system cell identifier in said each entry.

Claims 15-21 (Cancelled).

22. (Currently Amended) ~~The network file server as claimed in claim 17~~ A network file server comprising data storage for storing a meta file system, the meta file system including a plurality of file system cells, and the network file server having at least one network port coupled to the data storage for providing network clients with access to the meta file system in the data storage, wherein the network file server is programmed for:

receiving, from a network client, a directory lookup request for an object in the meta file system, and in response, performing a directory lookup for the object, and returning to the network client a file handle for the object, the file handle including an identifier of a file system cell including the object, and a pointer to the object in the file system cell; and

receiving, from the network client, a request for access to the object, the request for access to the object including the file handle for the object, and in response to receipt of the request for access to the object, extracting the file system cell identifier and the object pointer from the file handle included in the request for access, using the file system cell identifier to find the file system cell that includes the object, and using the object pointer to find the object in the file system cell,

wherein the network file server includes a plurality of processors, and each of the file

system cells has a respective one of the processors that is assigned exclusive management of metadata of said each of the file system cells, and wherein the network file server is programmed for responding to the file access request by accessing a routing table with the extracted identifier of the file system cell in order to obtain a pointer to the respective one of the processors that is assigned exclusive management of metadata of the file system cell including the object, and using the pointer to the respective one of the processors to send a request to the respective one of the processors for management of metadata of the file system cell for accessing the object.

23. (Original) The network file server as claimed in claim 22, wherein the network file server is programmed for finding a reference to another one of the file system cells during the accessing of the object after using the pointer to the respective one of the processors, and accessing the routing table to find a pointer to the respective one of the processors that is assigned exclusive management of metadata of said another one of the file system cells, and using the pointer to the respective one of the processors that is assigned exclusive management of metadata of said another one of the file system cells to send a request to the respective one of the processor that is assigned exclusive management of metadata of said another one of the file system cells for access to metadata of said another one of the file system cells.

24. (Original) The network file server as claimed in claim 22, wherein the routing table includes a plurality of entries, and each entry includes a respective file system identifier of a file system cell in the meta file system, and an associated pointer to the respective one of the

processors assigned exclusive management of the metadata of the file system cell identified by said respective file system identifier of a file system cell in the meta file system.

25. (Original) The network file server as claimed in claim 22, wherein the routing table includes a plurality of entries, and each entry includes a respective file system identifier of a file system cell in the meta file system, and an associated pointer to a file system cell object containing a pointer to the respective one of the processors assigned exclusive management of the metadata of the file system cell identified by said respective file system identifier of a file system cell in the meta file system.

26. (Original) A network file server including a cached disk array and a plurality of data mover computers for moving data between a data network and a meta file system stored in the cached disk array, the meta file system including a plurality of file system cells, each of the file system cells having a respective one of the data mover computers assigned exclusive management of metadata of said each of the file system cells;

said network file server being programmed for storing a routing table in each of the data mover computers, the routing table in each of the data mover computers including an entry for each file system cell, each entry including a respective file system cell identifier and associating the respective file system cell identifier with a pointer to the respective one of the data mover computers assigned exclusive management of metadata of the file system cell identified by said respective file system cell identifier;

said network file server being programmed for responding to receipt of a request from the network for a file handle for a file by producing a file handle for the file, the file handle containing a file identifier obtained from the file system cell and a file system identifier for the file system cell containing the file; and

at least one of the data mover computers being programmed for receiving a subsequent request from the network for access to the file, the request for access to the file including the file handle, said at least one of the data movers being further programmed for responding to the request for access to the file by accessing the routing table in said at least one of the data mover computers to obtain the pointer to the respective one of the data movers assigned exclusive management of metadata of the file system cell containing the file in order to obtain management of metadata of the file system cell containing the file in order to access to the file.

27. (Original) The network file server as claimed in claim 26, wherein the network file server is programmed for interpreting a meta file system path specification associated with the file in order to produce the file handle for the file.

28. (Original) The network file server as claimed in claim 26, wherein each entry of the routing table in said at least one of the data mover computers includes a respective pointer to a respective file system cell object containing information associated with the file system cell identified by said respective file system cell identifier in said each entry, the information associated with the file system cell including a pointer to the data mover assigned exclusive

management of metadata of the file system identified by said respective file system cell identifier in said each entry.

29. (Original) The network file server as claimed in claim 28, wherein the respective file system cell object includes a local/remote flag indicating whether or not said at least one of the data mover computers is assigned exclusive management of metadata of the file system identified by said respective file system cell identifier in said each entry.

30. (Original) The network file server as claimed in claim 28, wherein the respective file system cell object includes a specification of a communication protocol to be used by said at least one of the data mover computers for communicating with the data mover assigned exclusive management of metadata of the file system identified by said respective file system cell identifier in said each entry.

Claims 31 – 32 (Cancelled).